

CLAIMS

1. A composite constructional element comprising:
  - a plank profile defining a rear face and two opposed edge sections of the constructional element, each edge section including an edge face; and
    - a cladding material moulded into the plank profile to extend continuously between the opposed edge faces such that it is retained by the rear face and the opposed edge faces.
- 10 2. A composite constructional element comprising:
  - a plank profile defining a rear face and two opposed edge sections of the constructional element, each edge section including an edge face; and
    - a cladding material moulded into the plank profile such that it is retained by the rear face and the opposed edge faces;
      - wherein the plank profile further comprises at least one retaining formation shaped to retain the moulded cladding material attached to the plank profile.
- 20 3. A composite constructional element according to claim 2, wherein the retaining formations are formed adjacent to or as part of the edge sections.
4. A composite constructional element according to claim 3, wherein the retaining formations comprise longitudinal channels of substantially uniform cross section and filled with cladding material, and being shaped in cross section to retain the moulded cladding material attached to the plank profile.
- 25 5. A composite constructional element according to claim 1 or 2, wherein the cladding material forms substantially an entire front face of the constructional element.

6. A composite constructional element according to claim 1 or 2, wherein each edge section comprises an attachment formation for attachment to a mating attachment formation on an adjacent constructional element.
- 5 7. A composite constructional element according to claim 6, wherein the attachment formations comprise a forwardly facing channel formed on one edge section and a rearwardly projecting lip formed on the opposed edge section, wherein the lip is capable of clipping into or  
10 being retained at a channel of an adjacent constructional element.
8. A composite constructional element according to claim 7, wherein the lip includes a recess such that, when clipped into or retained at a mating channel of an adjacent constructional element, a recess is defined between a base of the mating channel and the lip.
- 15 9. A composite constructional element according to claim 8, wherein the channel projects outwards beyond one edge face, and the lip is formed inwards from the opposed edge face.
- 20 10. A composite constructional element according to claim 9, wherein the channel is formed as a separate piece and includes a depending portion which extends over the adjacent edge face and is embedded in the cladding material once the constructional element is formed.
- 25 11. A composite constructional element according to claim 7, wherein, when the plank profile comprises at least one retaining formation shaped to retain the moulded cladding material attached to the plank profile, the lip comprises one of the retaining formations.
- 30 12. A composite constructional element according to claim 6, wherein the plank profile, including the rear face, the

edge sections and the attachment formations, is integrally formed from a sheet material.

13. A composite constructional element according to claim 1 or 2, wherein the plank profile is formed from sheet 5 steel.

14. A composite constructional element according to claim 13, wherein the plank profile is roll formed.

15. A composite constructional element according to claim 1 or 2, wherein the plank profile includes at least one 10 longitudinal stiffening formation comprising a ridge.

16. A composite constructional element according to claim 1 or 2, wherein the cladding material comprises cement, concrete, fibre cement, fibreglass, cellulose, foamed polymeric material, ceramics or polystyrene.

17. A composite constructional element according to claim 1 or 2, wherein the cladding material is glass reinforced cement.

18. A method of manufacturing a composite constructional element comprising the steps of:

20 providing a plank profile comprising a rear face and two opposed edge sections, each edge section including an edge face; and

25 moulding a cladding material into the plank profile such that it extends continuously between the opposed edge faces and is retained by the rear face and the opposed edge faces.

19. A method of manufacturing a composite constructional element comprising the steps of:

30 providing a plank profile comprising a rear face and two opposed edge sections, each edge section including an edge face, the plank profile further comprising at least one retaining formation; and

moulding a cladding material into the plank profile such that it moulds into the retaining formation to attach to the plank profile and is retained by the rear face and the opposed edge faces.

5 20. A method according to claim 18 or 19, wherein the plank profile is roll formed from sheet steel.

21. A method according to claim 18 or 19, wherein the plank profile comprises the only mould for moulding the cladding material.